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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/714,800

11/17/2003

Heinz Hofmann

15550Z

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EXAMINER

GELLNER, JEFFREY L

ART UNIT

PAPER NUMBER

3643

MAIL DATE

DELIVERY MODE

09/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/714,800

Applicant(s)

HOFMANN ET AL.

Examiner

Jeffrey L. Gellner

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 3 July 2001. A certified copy of the document was received 19 July 2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. (US 6,345,577 B1) in view of Berg et al. (US 4,770,728) in further view of Lee et al. (US 6,547,899 B2).

As to claim 1, Cramer et al. discloses a process of producing an insensitive explosive mixture (abstract) comprising TATB (col. 2 lines 52-60) in an amount less than 15% (from col. 3 lines 45-48) onto a secondary explosive ("RDX" of col. 2 lines 10-25) to form a coating of TATB on the secondary explosive which binds the secondary crystal. Not disclosed is the secondary explosive being a crystal and the TATB being sonochemically aminated. Berg, however, discloses coating crystals of the secondary explosive (col. 2 lines 11-17); Lee et al. discloses TATB being sonochemically aminated (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Cramer et al. by

Art Unit: 3643

using crystals as disclosed by Berg so as to have more surface area and to use sonochemically aminated TATB as disclosed by Lee et al. so as to have finer-grained TATB so as to increase shock insensitivity (see Lee et al. at abstract).

As to claim 3, Cramer et al. as modified by Berg et al. and Lee et al. further discloses use of RDX (col. 2 lines 10-26; Berg at col. 2 lines 11-17).

As to claim 4, the limitations of claim 1 are disclosed as described above. Not disclosed are the crystals being HMX. Berg, however, discloses the use of HMX (col. 2 lines 11-17). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Cramer et al. as modified by Berg and Lee et al. depending upon use of the composition.

As to claim 5, Cramer et al. as modified by Berg et al. and Lee et al. further disclose the ammonium solution (abstract of Lee et al.).

As to claims 6 and 7, Cramer et al. as modified by Berg et al. and Lee et al. further disclose use of ultrasonic irradiation for amination of TATB with ammonia, and toluene (Lee et al. at col. 2 lines 10-30).

As to claim 10, Cramer et al. as modified by Berg et al. and Lee et al. further disclose a binder (Cramer et al. at col. 2 lines 27-37).

As to claim 12, Cramer et al. as modified by Berg et al. and Lee et al. further disclose the animated TABA having a mean particle diameter of 6 to 8 micrometers ("4.90" micrometers of col. 3 lines 21-22 of Lee et al.).

As to claim 13, the limitations of claim 1 are disclosed as described above. Cramer et al. as modified by Berg et al. and Lee et al. further disclose the TABA having a mean particle

Art Unit: 3643

diameter of 4.90 micrometers (col. 3 lines 21-22 of Lee et al.). Not disclosed is the TATB being less than 1 micrometer. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Cramer et al. as modified by Berg and Lee et al. by having the TATB with a mean particle diameter less than 1 micrometer so as to have greater surface area so as to increase solubility rate, if needed.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. as modified by Berg et al. and Lee et al. in further view of Highsmith et al. (US 6,425,966 B1).

As to claim 11, the limitations of claim 1 are disclosed as described above. Not disclosed is the binder being a polyacrylic elastomer. Highsmith et al, however, discloses an explosive with TATB and HMX (see col. 5 lines 56-65) that uses either chlorotrifluoroethylene or polyacrylates as a binder (col. 5 lines 21-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Cramer et al. as modified by Berg et al. and Lee et al. by substituting polyacrylate for the binder depending upon availability and cost of the binder material.

Response to Arguments

Applicant's argument filed 5 July 2007 have been fully considered but they are not persuasive. Applicants' argument is that neither Cramer, Berg, Lee et al., nor Highsmith et al. disclose the coating of TATB used to bind the propellant grains together, especially since Cramer discloses use of a separate binder (Remarks pages 6-8).

As to this argument, Cramer et al. disclose the coating of TATB penetrating the propellant grains at col. 3 lines 40-41. With this amount of penetration the TATB is considered to help bind the surfaces of the propellant's grains together into one mass.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

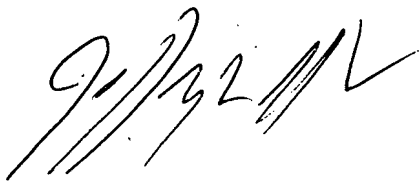
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Gellner whose telephone number is 571.272.6887. The examiner can normally be reached on Monday-Friday, 8:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571.272.6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3643

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'J. Gellner', with a stylized flourish at the end.

Jeffrey L. Gellner
Primary Examiner
Art Unit 3643